therapy (p = 0.003) as compared to non-depressed patients. Results of an extended-Cox proportional hazard model indicated that the hazard to switch/augment therapy was 2.4 times more for depressed patients as compared to non-depressed patients in the latter six-months of the follow-up period (p = 0.0005). Depression was consistently found to be a significant predictor of adherence, with depressed patients being 3–6% less adherent to their OHAs than non-depressed patients. **CONCLUSION:** Depression significantly impacts utilization patterns and adherence to OHAs in patients with type-2 diabetes. This lack of adherence may affect glycemic control and consequently incidence of diabetes related complications. The study results imply that depression screening and treatment may be included in the protocol for management of type-2 diabetes patients.

**PDB26**

### BURDEN OF NON-ADHERENCE TO ORAL ANTIDIABETICS

Curkendall S[1], Sarocco P[2], Goldberg GA[3], Patton MP[3]
[1]Healthcare Data Analysis, Vienna, VA, USA; [2]Sanofi-Aventis US Pharma, Bridgewater, NJ, USA; [3]i3 Magnifi, Reston, VA, USA

**OBJECTIVE:** Measure the effect of non-adherence to oral antidiabetic medications on total and diabetes-attributable health care costs in a managed care population. **METHODS:** Using a large managed care administrative claims database, all patients with a prescription for an oral antidiabetic from January, 2000 through June, 2001 were selected (n = 54,505) from among continuously eligible patients age 18 years and older. Total and diabetes-attributable costs were computed during one year of follow-up. A non-adherence variable, the total number of days that each patient was without antidiabetic medication, was computed. The computation allowed for stashing of antidiabetics within classes but not across classes (alpha-glucosidase, metformin, other secretagogues, sulfonylureas, thiazolidinediones). Multivariate log-linear regressions were estimated for costs using adherence, diabetes severity, overall comorbidity burden, hospitalization in prior six-months, concomitant insulin use, patient initiating antidiabetic therapy, insurance plan, and demographic variables. **RESULTS:** Overall, total and diabetes-attributable costs decreased with worsened adherence to oral antidiabetics. However, for the most costly patients (top 40%, median annual costs of $9391), there was a 1.66% increase in total costs for each 30 additional days without oral medication. Only patients with the top 10% of attributable costs had increased diabetes-attributable costs with worsening adherence. After excluding the cost of prescription antidiabetic medications, non-adherence increased costs in all but the lowest-cost patients (bottom 30%). The top 40%, with median non-drug attributable costs of $1339, realized a 6.38% cost increase with each 30 days without medication and the middle 30%, with median of $741, realized a 3.76% increase. **CONCLUSIONS:** During one year of follow-up, non-adherence to oral antidiabetics increased total and diabetes-attributable costs for the most resource-intensive patients but did not increase average costs for the population overall. For the 70% of patients with the highest diabetes-attributable costs, worsening adherence increased the medical services portion of diabetes-attributable costs.

**PDB27**

### IMPACT OF A DIABETES CARE PROJECT ON MEDICATION UTILIZATION AND ADHERENCE

Lee K, Sun SX, Matusik M, Bhayani H, Gunderson S, Bertram C
Walgreens Health Initiatives, Deerfield, IL, USA

**OBJECTIVES:** This study aims to evaluate medication adherence, utilization and costs associated with American Pharmacist Association's (AphA) Diabetes Care Project. **METHODS:** Patients with diabetes were assigned to an intervention or control cohort based on enrollment in APhA's Diabetes Care Project. Individual patients were included if they had at least two claims for diabetes medications and were continuously enrolled from April 1, 2002 to March 31, 2004. Retrospective pre-post cohort design, descriptive and multivariate modeling analyses were conducted to compare medication utilization between the two cohorts. **RESULTS:** A total of 118 patients (37 in the intervention and 81 in the comparison) were identified. There were no significant differences between the two cohorts in medication possession ratio (MPR), pharmacy costs, and the number of prescriptions of diabetes drugs, ACE inhibitors, and needles at baseline. During the 12-month post period, patients in the intervention were more likely to have a prescription for test strips (OR = 144.9, p < 0.0001) and needles (OR = 11.7, p < 0.0001). Compared to the baseline period, patients with pharmacist intervention had significantly more prescriptions for test strips (0.68 vs. 5.32), diabetes medications (6.24 vs. 11.41), needles (1.27 vs. 4.24) and ACE inhibitors (1.68 vs. 3.03), a higher MPR with diabetes drugs (0.67 vs. 0.96) and higher pharmacy costs ($689.9 vs. $1617.8), whereas patients in the comparison had no significant differences. **CONCLUSIONS:** APhA Diabetes Care Project significantly increased patients?adherence to therapy and utilization for test strips, needles, diabetes medications and ACE inhibitors. The increased adherence to therapy may offer both clinical and cost benefits to patients. (Acknowledgments: American Pharmacists Association; The Manitowoc Health Care Coalition; Don F. Jabas Associates.)

**PDB28**

### AN EVALUATION OF A DISEASE MANAGEMENT PROGRAM FOR ADULT DIABETICS IN A MEDICAID POPULATION

Yaffe K, Skrepnek GH, Armstrong EP
University of Arizona College of Pharmacy, Tucson, AZ, USA

**OBJECTIVE:** To investigate the effects of a disease management program on diabetic adults in a Medicaid population. **METHODS:** This study was a retrospective database analysis of diabetes-related costs and utilization and of overall costs. A pre-post design with a concurrent control group was employed. To ensure appropriate comparability, the study group and control group were matched using propensity scoring techniques. Data available for analysis spanned from July, 2000 to May, 2004, while rolling enrollment period for the disease management program occurred between October, 2002 and July, 2003. **RESULTS:** From a potential pool of 2921 diabetics that were identified within a Medicaid program, a study population of 388 was initially assessed for eligibility within counties that were targeted to implement the disease management program. After applying exclusion criteria, 122 diabetics began enrollment within the program. Ultimately, 32 diabetics completed the 12 month disease management program. Results indicated that mean monthly diabetes-related medical costs per patient were $190 in the pre-period and $225 in the post-period. Mean monthly total medical costs per patient were $930 in the pre-period and $939 in the post-period. Mean monthly pharmacy costs per patient were $378 in the pre-period and $473 in the post-period. Further multivariate analysis adjusted for demographic characteristics, initial utilization, and chronic disease score. **CONCLUSIONS:** Higher costs in the post-period may be associated with increased levels of care motivated by participation in the program. For a disease such as diabetes, the positive long-term effects due to better care may not be apparent in the short period of time during which the study data was gathered. A longer-term analysis is warranted. In addition, a small proportion of patients (8.2%) completed the full 12-month diabetes